

Beaver Bridge
Spanning White River at State Highway 187
Beaver
Carroll County
Arkansas

HAER No. AR-53

HAER
ARK,
8-BEAV,
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

BEAVER SUSPENSION BRIDGE

HAER NO. AR-53

HAER
ARK,
8-BEAV,
1-

LOCATION: Spanning the White River on State Highway 187 in the town of Beaver, Carroll County, Arkansas.

UTM: 15/40363370/431170

Quad: Beaver

DATE OF
CONSTRUCTION: ca. 1915

MAJOR ALTERATIONS
AND ADDITIONS: A major renovation of this bridge was completed ca. 1980.

PRESENT CONDITION
AND USE: The bridge is in excellent condition and is currently being used for vehicular and pedestrian traffic.

STYLE: Single span, wire cable suspension bridge.

BUILDER: Unknown. It is assumed that Carroll County officials contracted with an unidentified bridge construction company for the construction of the Beaver Bridge early in the twentieth century.

SIGNIFICANCE: The Beaver Bridge is one of two suspension bridges surviving in Arkansas (the other is the Winkley Bridge, HAER No. AR-48). It is the only suspension bridge currently being used for vehicular traffic.

HISTORIAN: Michael Swanda
Survey Coordinator
Arkansas Historic Preservation Program
August 26, 1988.

STRUCTURAL SYSTEMS

The Beaver Bridge uses a set of two steel cables draped over two steel towers on concrete piers. These steel cables are anchored in concrete abutments buried in the ground. Each of the four main cables contain six individually stranded cables entwined together. From these double cables are suspended vertical steel rod tension members that support a steel substructure. This steel I-beam stringer system is used for stiffening and is laterally braced with diagonal steel beams. Timber floor beams are laid perpendicularly across the steel stringers and support a timber roadway deck. The towers are constructed of two vertical steel I-beams that are pin-connected at the base to a bearing block that is anchored to the top of the concrete pier. This pin connection allows the towers to pivot from the base under live load conditions. Each tower is laterally braced with a series of struts and diagonally crossed members built up from riveted angles and batten plates. Timber posts and planks make up the guardrail.

DIMENSIONS

The Beaver Bridge is approximately 600 feet long.

ADDITIONAL INFORMATION

AHPP Resource No. CR1042.

SOURCES OF INFORMATION

Bridge Division Files, Arkansas Highway and Transportation Department, Little Rock.

Historic Bridge File, Arkansas Historic Preservation Program, Little Rock.

McClurkan, Burney B. Arkansas' Historic Bridge Inventory, Evaluation Procedures 1987 and Preservation Plan. Manuscript of file, Environmental Division, Arkansas Highway and Transportation Department, Little Rock.

ADDENDUM TO:
BEAVER BRIDGE
Spanning White River at State Highway No. 187
Beaver
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HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN ENGINEERING RECORD

**ADDENDUM TO
BEAVER BRIDGE**

HAER No. AR-53

This is an addendum to a 2 page report previously transmitted to the Library of Congress.

Location: Spanning White River at State Highway No. 187, Beaver, Carroll County, Arkansas

UTM: 15.40363370.431170, Beaver, Arkansas Quad.

Structural Type: Wire cable suspension bridge

Construction Date: 1947-1949

Designer: Arkansas State Highway Commission

Builder: Pioneer Construction Company, Inc., Malvern, Arkansas¹

Owner: State of Arkansas

Use: Vehicular bridge

Significance: In 1850, Wilson A. Beaver established a ferry near this location on the White River.² Beaver Ferry operated until 1926, when Carroll County built a concrete bridge at this site. After a flood destroyed that bridge in 1943, the Arkansas State Highway Commission erected the present bridge at a cost of \$107,785. Beaver Bridge is the youngest and longest of three extant suspension bridges in Arkansas.³

¹ Further research is needed to determine this company's relationship to the Pioneer Construction Company of Kansas City, Missouri, established in 1918.

² *History of Benton, Washington, Carroll, Madison, Crawford, Franklin and Sebastian Counties, Arkansas*, (Chicago: Goodspeed Publishing, 1889), 1046-1047.

³ Arkansas' extant suspension bridges include: Bear Creek Bridge (1940) in Boone County (see HAER No. AR-87) and Sylamore Creek Bridge (1945) in Stone County (see HAER No. AR-88).

Project Information: The Arkansas Historic Bridges Recording Project is part of the Historic American Engineering Record (HAER), a long-range program that documents historically significant engineering sites and structures in the United States. HAER is administered by the Heritage Documentation Programs Division of the National Park Service, United States Department of the Interior, Richard O'Connor, Manager. The Arkansas State Highway and Transportation Department sponsored this project.

Lola Bennett, HAER Historian, 2007

Chronology

- 1801 James Finley erects America's first suspension bridge at Uniontown, Pennsylvania
- 1803 Louisiana Purchase doubles size of the United States
- 1819 Arkansas Territory created from part of Louisiana Purchase
- 1833 Carroll County formed
- 1834 Henri Vicat pioneers wire cable spinning technology in France
- 1836 Arkansas becomes 25th state to join the Union
- 1841 Charles Ellet erects America's first wire cable suspension bridge at Philadelphia
- 1849 Charles Ellet builds 1,010' wire cable suspension bridge at Wheeling, West Virginia
- 1850 Wilson Beaver (1831-1915) establishes a trading post and ferry near this site
- 1855 John Roebling's 821' Niagara Falls Bridge completed at Niagara, New York
- 1873 Arkansas Legislature authorizes counties to build and maintain bridges
- 1883 John Roebling's 1,595' Brooklyn Bridge completed at Brooklyn, New York
- 1926 Luten Bridge Company builds three-span concrete bridge across White River at Beaver⁴
- 1943 Flood destroys Beaver Bridge
- 1945 Arkansas State Highway Department begins plans for suspension bridge at Beaver
- 1947 Pioneer Construction Company wins contract for Beaver Suspension Bridge
- 1949 Beaver Suspension Bridge completed
- 1958 U.S. Army Corps of Engineers completes Table Rock Dam, forming Beaver Lake
- 1981 Beaver Bridge deck replaced⁵
- 1990 Beaver Suspension Bridge listed in the National Register of Historic Places
- 1996 Beaver Suspension Bridge closed for repairs
- 2003 Beaver Suspension Bridge rehabilitated at a cost of \$120,000
- 2005 Beaver Suspension Bridge featured in the movie "Elizabethtown"⁶

⁴ *Eureka Springs Flashlight*, 5 August 1926, 6.

⁵ "Historic Bridge Renovation Completed," *Carroll County Tribune*, 18 March 1981.

⁶ Michelle Parks, "Beaver Bridge Spans Movie to Reality in Relative Obscurity," *Arkansas Democrat-Gazette*, 27 November 2005.

Sources

Arkansas State Highway Commission. "Plan of Proposed Bridge over White River, Beaver, Arkansas," 1947.

Arkansas Highway and Transportation Department. *Bridge Records: Bridge No. 02388*.

Branan, Brad. "Bridge to be Repaired, but Future Still Unsure," *Benton County Daily Record*, 1 March 2003, 1.

_____. "Carroll County Residents Want to Preserve Landmark," *Benton County Daily Record*, 31 March 2003, 1.

Carroll County Court Records, 1925-1945. Office of the County Clerk, Carroll County Courthouse, Berryville, Arkansas.

Dungan, Tracie. "Beaver Bridge Spans History," *Arkansas Democrat-Gazette*, 25 July 1999.

Eureka Springs Flashlight, 5 August 1926, 2.

"Historic Bridge Renovation Completed," *Carroll County Tribune*, 18 March 1981.

History of Benton, Washington, Carroll, Madison, Crawford, Franklin, and Sebastian Counties, Arkansas. Chicago: Goodspeed Publishing, 1889.

Lewis, Bill. "Shake and Rock: Suspension Bridges in Arkansas Mark of the Past," *Arkansas Gazette*, 28 July 1957, 3F.

Parks, Michelle. "Beaver Bridge Spans Movie to Reality in Relative Obscurity," *Arkansas Democrat-Gazette*, 27 November 2005.